

Agilent Ref: 10030712-1
United States Application Serial No. 10/722,950

RESPONSE

In view of the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow all pending claims.

Formal Matters

Claims 1, 18, 27-29, 53, 55 and 57, 59-62 are pending after entry of the amendments set forth herein.

Claims 1, 16-18, 27-29, 53-55 and 57-62 were examined and rejected. No claims were allowed.

Claims 16, 17, 54, and 58 have been canceled.

Claims 1, 18, 53, 55, 57, and 59 have been amended. Support for the amendments can be found in the claims as originally filed and throughout the specification at, for example, original claims 2, 4, and 17.

No new matter is added.

Rejection under 35 U.S.C. §102(b)

Claims 1, 16-17, 28, 53-54, 57-58, and 61 have been rejected under 35 U.S.C. §102(b) for allegedly being anticipated by Audino et al. (US Patent Publication No. 2002/0083686). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed.

In the spirit of expediting prosecution and without conceding as to the correctness of the rejection, claims 1, 53, and 57 have been amended to recite "wherein the array assay chamber comprises at least one addressable array on said microarray substrate".

In contrast, Audino et al. is directed to a device comprising a multi-well plate with a laminate layer over the top of the multi-well plate producing a series of individual sealed wells (see Figures 1-3 and page 2, paragraph [0020]). Audino et al. does not further teach a sealed assay chamber that comprises an addressable array.

Agilent Ref: 10030712-1
United States Application Serial No. 10/722,950

It is well established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987), cert. denied, 481 U.S. 1052 (1987). See also, Scripps Clinic and Research Foundation v. Genentech, Inc., 18 USPQ 2d 1001 (Fed. Cir. 1991).

Since the cited reference fails to teach formation of an array assay chamber that is sealed by the gasket and includes at least one addressable array, the cited reference fails to teach each and every limitation as found in the claims. Therefore, the Applicants respectfully request that this rejection be withdrawn.

Rejection under 35 U.S.C. §103(a)

Claims 18, 27, 55, and 59-60 have been rejected under 35 U.S.C. §103(a) as being unpatentable for allegedly being rendered obvious by Audino et al. (US Patent Publication No. 2002/0083686). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed.

As noted above, claims 1, 53, and 57 have been amended to recite "wherein the array assay chamber comprises at least one addressable array on said microarray substrate". In contrast, the cited reference is directed to a device comprising a multi-well plate with a laminate layer over the top of the multi-well plate producing a series of individual sealed wells (see Figures 1-3 and page 2, paragraph [0020]). The cited reference does not further teach a sealed assay chamber that comprises an addressable array.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 21 USPQ2d 1941 (Fed. Cir. 1992). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 231 USPQ 375 (Fed. Cir.

Agilent Ref: 10030712-1
United States Application Serial No. 10/722,950

1986). Third, the prior art reference, or references when combined, must teach or suggest all the claim limitations. *In re Royka*, 180 USPQ 580 (CCPA 1974).

Since the cited reference fails to teach or suggest formation of an array assay chamber that is sealed by the gasket and includes at least one addressable array, the cited reference fails to teach or suggest each and every limitation as found in the claims. Therefore, the Applicants respectfully request that this rejection be withdrawn.

Rejection under 35 U.S.C. §103(a)

Claims 18, 27, 55, and 59-60 have been rejected under 35 U.S.C. §103(a) as being unpatentable for allegedly being rendered obvious by Audino et al. (US Patent Publication No. 2002/0083686) in view of Gilmore et al., (U.S. Patent Pub. No. 2003/207,099). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed.

As noted above, Audino et al. fails to teach or suggest formation of an array assay chamber that is sealed by the gasket and includes at least one addressable array. Since Gilmore has been cited for its teaching of consecutive plasma application, Gilmore fails to make up the deficiency of Audino et al. In addition, Gilmore et al. teaches wells not chambers and notes that the "polymer mixture forms a thin lace-like elastomer" (page 2, paragraph [0024]). Therefore, Gilmore et al. fails to teach a sealed array assay chamber, much less a sealed chamber that includes an addressable array.

As such, the combination of the references fails to teach or suggest each and every limitation found in the claims of the present invention. Therefore, since the cited references cannot render the present application obvious, the Applicants respectfully request that this rejection be withdrawn.

Rejection under 35 U.S.C. §103(a)

Claims 1, 16-18, 27-29, and 53-55 have been rejected under 35 U.S.C. §103(a) as being unpatentable for allegedly being rendered obvious by Desrosiers et al. (US Patent No. 6,410,332) or Dunnington et al. (US Patent No. 6,376,256) or Stanchfield et

Agilent Ref: 10030712-1
United States Application Serial No. 10/722,950

al (US Patent No. 6,054,100) in view of Matsuzawa et al., (JP2000-300670 A). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed.

The amended claims are directed to a method for treating a backing element comprising a gasket for forming an array assay chamber that is sealed by the gasket, wherein the array assay chamber includes at least one addressable array by either (1) depositing SiO₂ on the gasket; (2) contacting the gasket with at least one of a liquid phase and a vapor phase; or (3) contacting the gasket with plasma, to treat the gasket of the microarray structure.

As noted in the Office Action, Desrosiers et al., Dunnington et al. and Stanchfield et al, all teach use of gaskets for joining multi-well structures for chemical sampling and analysis or synthesis (Office Action, page 5). However, none of the references teach a sealed assay chamber that comprises an addressable array.

Matsuzawa et al., has been cited for providing "a means for making rubber gaskets useful syringes that have satisfactory sealing properties with respect to medicinal fluids" (Office Action, page 6). Matsuzawa et al. also fails to teach a sealed assay chamber that comprises an addressable array. Therefore, Matsuzawa et al. fails to make up the deficiency of Desrosiers et al., Dunnington et al. or Stanchfield et al.

The law is clear that to establish a prima facie case of obviousness, the prior art reference, or references when combined, must teach or suggest all the claim limitations. *In re Royka*, 180 USPQ 580 (CCPA 1974). As noted above, all the cited references fail to teach each and every limitation found in the claims of the present application. In particular, the combination of the references fails to teach a method of treating a backing element comprising a gasket for forming a sealed array assay chamber, wherein the chamber comprises at least one addressable array.

Agilent Ref: 10030712-1
United States Application Serial No. 10/722,950

As such, since the cited reference fails to teach each every limitation found in the claims of the present application, the cited reference fails to render the claims of the present application obvious. Therefore, the Applicants respectfully request that this rejection be withdrawn.

Non-Statutory Double Patenting

Claims 1, 16, 28, 53, 57, and 61 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15-17 of U.S. Patent Application Serial No. 10/172,850.

While Applicant does not acquiesce to the validity of the rejection, Applicant hereby submits the accompanying Terminal Disclaimer with respect to U.S. Patent Application Serial No. 10/172,850 in order to move the prosecution of the pending claims forward. Accordingly, Applicants respectfully request withdrawal of this rejection.

Rejection under 35 U.S.C. §102/103

Claims 1, 16, 28, 53, 57, and 61 have been rejected under 35 U.S.C. § 102(b) for allegedly being anticipated or, in the alternative, under 35 U.S.C. §103(a) for allegedly being obvious over Schleifer et al. (U.S. Patent Publication No. 2003/0231985).

As noted above, the amended claims are directed to a method for treating a backing element comprising a gasket for forming an array assay chamber that is sealed by the gasket, wherein the array assay chamber includes at least one addressable array by either (1) depositing SiO₂ on the gasket; (2) contacting the gasket with at least one of a liquid phase and a vapor phase; or (3) contacting the gasket with plasma, to treat the gasket of the microarray structure. There is no teaching or suggestion in Schleifer et al. to modify the gasket according the protocols specified in the amended claims.

Agilent Ref: 10030712-1
United States Application Serial No. 10/722,950

As such, since the cited reference fails to teach each every limitation found in the claims of the present application, the cited reference fails to anticipate the claims or render the claims obvious. Therefore, the Applicants respectfully request that this rejection be withdrawn.

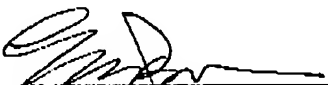
Agilent Ref: 10030712-1
United States Application Serial No. 10/722,950

CONCLUSION

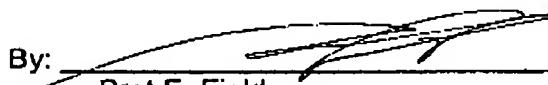
The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078.

Respectfully submitted,

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encs:

- Terminal Disclaimer with respect to U.S. Patent Application Serial No. 10/172,850

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